

REMARKS**Summary of the Office Action**

Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Keisuke et al. (JP 2003-045665) (hereinafter "Keisuke").

Summary of the Response to the Office Action

Applicants have added new claims 7-10 to differently describe embodiments of the disclosure of the instant application. Accordingly, claims 3, 4 and 7-10 are currently pending for consideration.

Rejections under 35 U.S.C. § 103(a)

Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Keisuke. Applicants respectfully submit that at the end of paragraph [06] of the Office Action, the Examiner acknowledges that Keisuke does not "explicitly appear to disclose the relationships provided in the instant claims." However, the Examiner goes on to make various assertions in connection with the rejections under 35 U.S.C. § 103(a) in the Office Action.

The Examiner's assertions associated with these rejections, such as those included in paragraphs [07] and [08] of the Office Action, are respectfully traversed for at least the following reasons (1) – (3) which will now each be discussed in detail.

(1) Applicants respectfully submit that in paragraph 0031, Keisuke teaches that the specific resistance ρ of the conductive highpolymer is preferably $1 \times 10^3 < \rho < 1 \times 10^8 \Omega \cdot \text{cm}$, and more preferably $1 \times 10^5 < \rho < 1 \times 10^7 \Omega \cdot \text{cm}$. Also, in paragraph 0032, Keisuke teaches that the

film thickness of the conductive highpolymer layer is preferably 10~200 nm, and more preferably 20~100 nm.

Keisuke further discloses, in paragraph 0024, that it is preferable to form the conductive highpolymer layer so that the resistance R between pixels satisfies the relationship $R > 20n \cdot V_f(n)/I_f(n)$ where n represents vertical resolution, $V_f(n)$ represents an instantaneous voltage input to the OLED, and $I_f(n)$ represents the current flowing through the OLED element at $V_f(n)$.

However, Applicants note that Fig. 1 of Keisuke depicts that the layers (3-8) above the positive hole injection electrode 2 on the substrate 1 have a width narrower than the width of the electrode 2 and the substrate 1. In other words, Applicants respectfully submit that Keisuke does not disclose any portion that corresponds to the gap filling part GF typically shown in Fig. 5 of the instant application.

In this connection, Applicants consider that, in view of paragraphs 0024-0030 of Keisuke, the disclosed feature is based on the following relationship:

(resistance between pixels) = (the resistance of the conductive highpolymer layer)

Therefore, Applicants understand that Keisuke defines the resistance of the “conductive highpolymer layer” to prevent the crosstalk.

Applicants respectfully submit that the above-described relationship is particularly different from the relationship according to features of the instant application described below:

(resistance between pixels) = (resistance by the laminated layers formed solidly (continuously)) = (gap filling part)

In other words, Applicants respectfully submit that the resistance between the pixels is defined considering all of the layers between the pixels.

Applicants respectfully submit that, even if the disclosure of Keisuke is interpreted as broadly as possible, the conductive highpolymer layer only corresponds to the gap filling part according to the present invention. As a result, the structure of the OLED disclosed by Keisuke is clearly different from the present invention.

For instance, if a low resistance layer besides the conductive highpolymer layer exists in the layers formed also between pixels, the resistance between the pixels will fall accordingly, and as a result the crosstalk increases. Applicants respectfully submit that this situation is similar to such a case that the resistance of any of the layers 36, 32, 37 shown in Fig. 2 of the present application is low.

Nevertheless, in order to further distinguish the present invention from the disclosure of Keisuke, the Applicants have added new dependent claims 7-10.

(2) Applicants' second point for traversing the Office Action's rejections is that Keisuke discloses in paragraph 0032 that the film thickness of the conductive highpolymer layer needs to be 10nm at smallest, but it is preferable to be 200nm or less when considering the crosstalk and light emission characteristics. However, Applicants respectfully submit that this simply means that the range (10-200nm) of the film thickness which includes the thickness (20nm) of the polyaniline film in the embodiment of the present invention is disclosed. In other words, Applicants note that the lower limit values of the sheet resistance of the gap filling part defined in claims 3 and 4 of the present application cannot automatically be resulted from the above-mentioned disclosure of Keisuke.

(3) Applicants' third point for traversing the Office Action's rejections is that Keisuke discloses that the conductive highpolymer has a polythiophane derivative framework or a polyaniline derivable framework that is utilized so that the value of the specific resistance ρ

becomes a desired value. In a manner different from the feature of Keisuke described above, the present invention includes an advantageous feature in that the lower limit (minimum) value of the sheet resistance is set so as to satisfy the claimed formulas in which the number of display grayscales is taken into account.

As described in the paragraph bridging pages 17 and 18 of the specification of the instant application, Applicants respectfully submit that an objective of the present invention is to solve a problem in that the order of grayscale levels is reversed when the luminance lowers at pixels in which leakage of the electric current occurs. Applicants respectfully submit that this problem has not been considered before the novel solution discovered by the inventors of the present application. Applicants respectfully submit that the disclosure of Keisuke does not even suggest this problem.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. § 103(a) should be withdrawn because Keisuke does not teach, or even suggest, each feature of independent claims 3 and 4. As pointed out in MPEP § 2143.03, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” Accordingly, Applicants respectfully submit that independent claims 3 and 4 are in condition for allowance. Also, newly-added dependent claims 7-10 are in condition for allowance at least because of their dependence from independent claims 3 or 4, and the reasons previously discussed.

CONCLUSION

In view of the foregoing amendments and remarks, withdrawal of the rejections and allowance of all pending claims are earnestly solicited. Should the Examiner feel that there are

any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.


EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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